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ARCHAEOLOGICAL SURVEY AND TESTING MOLINE LOCAL FLOOD
PROTECTION PROJECT ROCK ISLAND COUNTY ILLINOIS(U)
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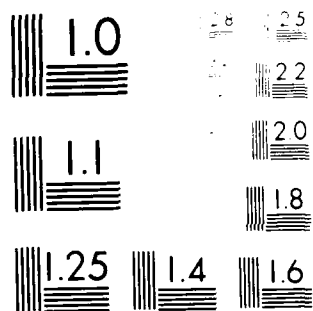
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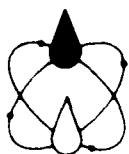
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Project Number 0547

October 20, 1980

FINAL

ARCHAEOLOGICAL SURVEY AND TESTING,
MOLINE LOCAL FLOOD PROTECTION PROJECT,
ROCK ISLAND COUNTY, ILLINOIS

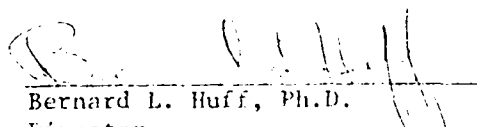
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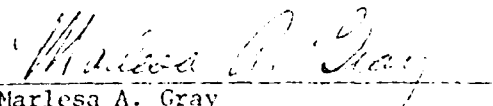
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October 1980

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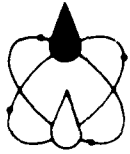

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ABSTRACT

An archaeological field survey was conducted of two areas within Rock Island County, Illinois, for the U.S. Army Corps of Engineers, Rock Island District. One archaeological site, Site Number W-547-1, and an isolated artifact were discovered within an area to be used for fill disposal. The site was tested, but no cultural features were identified. On the basis of the testing, it was recommended that no further archaeological work be done at the site. The report includes a summary of the areal prehistory and history, a detailed description of the survey methodology, and a description of the project results.

MANAGEMENT SUMMARY:
ARCHAEOLOGICAL SURVEY AND TESTING,
MOLINE LOCAL FLOOD PROTECTION PROJECT,
ROCK ISLAND COUNTY, ILLINOIS

From May 1 to May 5, 1980, archaeologists from WAPORA, Inc., Cincinnati, Ohio, conducted an intensive survey and testing program of the borrow area for the proposed Moline local flood protection project and a proposed fill disposal area in the Rock River floodplain, Rock Island County, Illinois. This report summarizes the results of the background literature search and the field survey. This field survey was conducted within a framework of the regional environment and a cultural overview, both prehistoric and historic, for the area.

The fieldwork and report preparation were conducted under the terms of a contract between WAPORA, Inc. and the U.S. Army Corps of Engineers, Rock Island District. Ms. Marlesa A. Gray served as Principal Investigator for the project, with field assistance from Barbara Huels. Information on site locations in and near the project area was provided by Mark Wagner of the Illinois Department of Conservation, State Historic Preservation Office. Carol Hund and Shirley Schwieters of the Putnam Museum, Davenport, Iowa, provided access to museum collections and files. Information on the local prehistory and history was provided by Ferrel and Karen Anderson, of Davenport. The project monitor for the Corps of Engineers was Roy Eichhorn.

Requirements of the contract included a literature search and background review of pertinent information on known site locations and an overview of the regional prehistory and history. Upon completion of the background research, an initial survey was to be conducted to locate sites likely to be affected by the project. Any located sites were to be sufficiently tested to allow for a determination of eligibility to the National Register of Historic Places. The final task was to prepare a report summarizing the results of the background literature search and the field survey, with special consideration being given to the question of eligibility to the National Register of each located site (see Appendix A, Scope of Work).

One site (Site Number W-547-1) was discovered in the proposed fill disposal area (Project Area A). The site has been tentatively identified as an Archaic site. Shovel testing at 5m intervals across the site and excavation of a 1m square test unit indicated that the site has been extensively disturbed through past plowing activity. The site is characteristic of many in the area and is not considered significant enough to warrant further archaeological investigation. Use of the project area for fill disposal will have no adverse effect upon the site.

The survey of the proposed borrow area for the Moline local flood protection project uncovered no evidence of either prehistoric or historic cultural activity. Therefore, the proposed project will have no effect upon any significant cultural resources.

This project was undertaken to ensure compliance with the following Federal legislation: the National Historic Preservation Act of 1966, as amended (PL 89-665); the National Environmental Policy Act of 1969 (PL 91-190); Executive Order 11593 (Protection and Enhancement of the Cultural Environment); National Register of Historic Places, Determinations of Eligibility for Inclusion (36 CFR 63); Advisory Council's Procedures for the Protection of Historic and Cultural Properties (36 CFR 800); and Identification and Administration of Cultural Resources (33 CFR 305).

INTRODUCTION

From May 1, 1980, through May 5, 1980, WAPORA, Inc. conducted an intensive archaeological survey and testing program within areas to be affected by the Moline Local Flood Protection Project, Rock Island County, Illinois. This report summarizes the methodology and the results of the fieldwork, and provides an overview of the regional prehistory and history as a contextual framework for the survey and testing program.

The fieldwork and report preparation were conducted under the terms of a contract between WAPORA, Inc. and the U.S. Army Corps of Engineers, Rock Island District. Ms. Marlesa A. Gray served as Principal Investigator for the project, with field assistance from Barbara Huels. Information on site locations in and near the project area was provided by Mark Wagner of the Illinois Department of Conservation, State Historic Preservation Office. Carol Hund and Shirley Schwieters of the Putnam Museum, Davenport, Iowa, provided access to museum collections and files. Information on the local prehistory and history was provided by Ferrel and Karen Anderson, of Davenport. The project monitor for the Corps of Engineers was Roy Eichhorn.

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All artifacts, field and analysis notes, original photographs, and a copy of the final report will be curated with the Illinois State Museum, Springfield, upon acceptance of the final report.

PROJECT LOCATION AND ENVIRONMENTAL SETTING

LOCATION AND PROJECT DESCRIPTIONS

The two areas surveyed under the terms of this contract are located in the northwestern portion of Illinois, near the confluence of the Rock River and the Mississippi River. Both areas are situated just outside the city limits of Moline, in Rock Island County.

Project Area A consists of approximately 10 acres of city-owned land in the E 1/2 of the SW 1/4 of the NE 1/4 of Section 15, Range 1 West, Township 17 North. It is being considered as a possible fill disposal area. The proposed borrow area for the Moline Local Flood Protection project (Project Area B) consists of approximately 30 acres in the SW 1/4 of the NE 1/4 of Section 28, Range 1 West, Township 17 North. The two project areas are shown in Figure 1.

PHYSIOGRAPHY, SOILS, AND LITHIC RESOURCES

The two project areas are located in a physiographic setting known as the Galesburg Plain, part of the Till Plains section of the Central Lowland province (Leighton, Ekblaw, and Horberg 1948). The present course of the Rock River through the area was formed as a result of the Wisconsin glacialiation. Changes in the topography since the last glacialiation have been the result of various riparian processes, such as erosion and alluvial deposition.

The soils in the vicinity of Project Area A consist of interspersed yellow-orange sands and dark brown sandy alluvial loam. The topographic setting of this portion of the Rock River floodplain is marked by the presence of numerous sand ridges running parallel to the river. The elevation within the floodplain ranges from 560 to 580 feet above sea level and the width of the floodplain at this particular location is three kilometers. The terraces near the base of the adjacent bluffs are well defined.

Project Area B is located on top of the bluffs that mark the southern edge of the Rock River floodplain. The bluffs are extremely steep in slope and rise as much as 110 feet above the floodplain, their average elevation being 650 feet above sea level. The bluffs within the project area are dissected by several narrow, deep valleys and ravines, formed through the erosional activity of small intermittent streams. The upland soils within the project area consist of a yellow-orange clay overlain by a brown clayey loam on the bluffs and a dark brown silty clay colluvial deposit in the ravine bottoms.

Both project areas are situated just downriver from several good sources of chert. Chert-bearing exposures have been discovered throughout the dissected uplands bordering the Rock River valley. The most

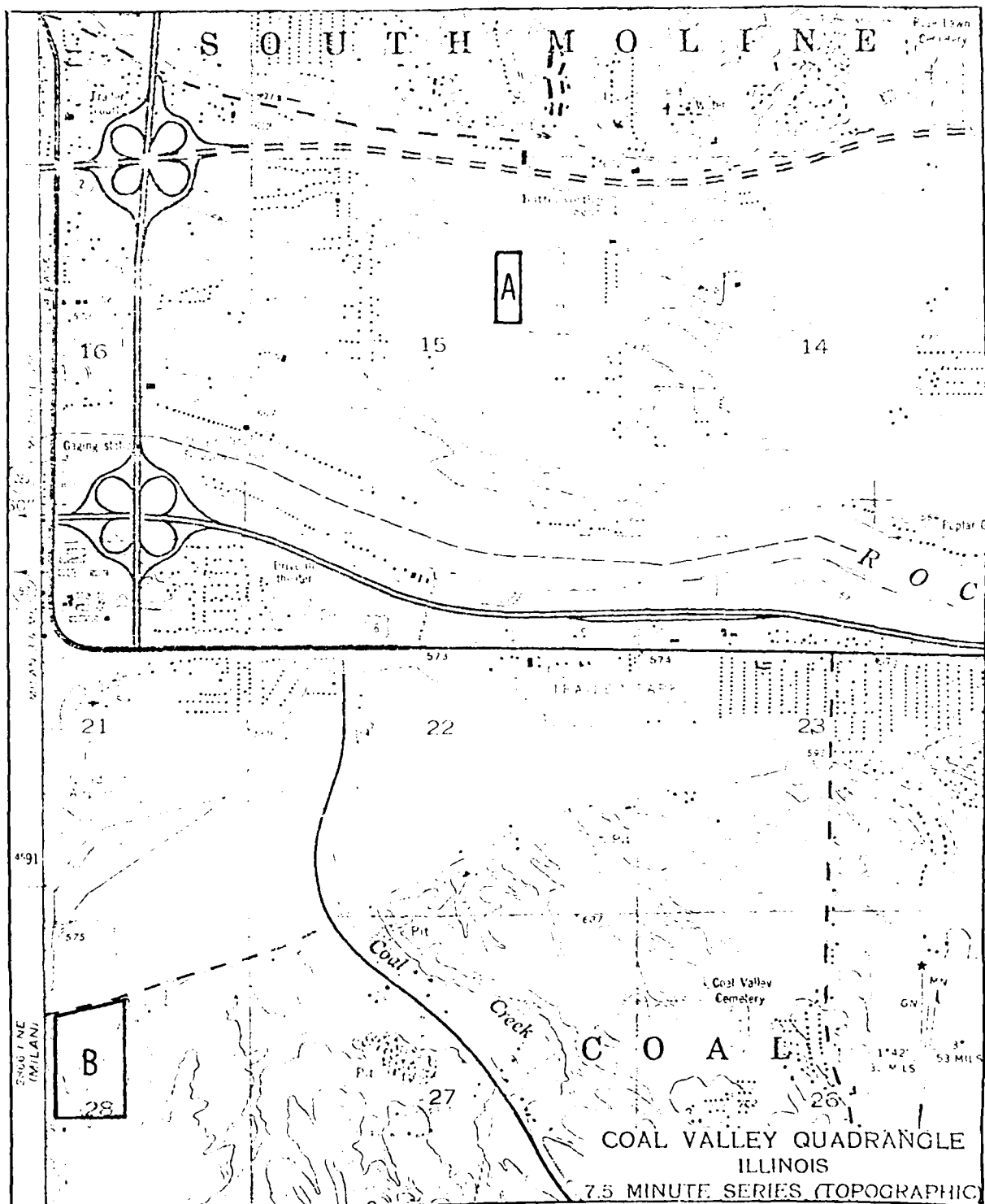


FIGURE 1. USGS Quad Map Showing Locations of Project Areas A and B.

distinctive of these resources is that known as "Moline Chert." This type is generally fine-grained and ranges in color from a light gray through blue-gray to blue-black. This range in variation of color has generally been considered to occur naturally, although it has also been hypothesized that the darker colors are the result of heat treatment in an oxygen-reducing atmosphere (R. Eichhorn, May 5, 1980; personal communication). Artifacts and debitage of "Moline Chert" have been found throughout northwestern Illinois and eastern Iowa in archaeological contexts ranging from the Early Archaic through the Late Woodland/Upper Mississippian (Birmingham 1976:15).

BIOTIC RESOURCES

A range of biotic communities exists within the general project area. Urban development and agricultural modifications have altered much of the original vegetational setting within the project area; however, portions of the original setting, which include Project Area A, still exist. Project Area A, in the Rock River floodplain, is characterized by low, marshy areas interspersed with parallel sandy ridges. The low areas support a wide variety of plants, including cattails (Typha latifolia), marsh elder (Iva sp.), willows (Salix sp.), persicaria (Polygonum sp.), and various forms of bracken. The vegetation of the sand ridges is characterized by a variety of grasses, lamb's quarters (Chenopodium album), and some thickets.

Approximately 20 acres of Project Area B are currently under cultivation. Those portions of the bluffs that are not being used agriculturally are covered with a variety of grasses and shrubs. The remainder of the area, consisting of the bluff slopes and the ravine bottoms are moderately to heavily forested. Deciduous species identified in these areas include oak (Quercus sp.), hickory (Carya sp.), maple (Acer sp.), walnut (Juglans sp.), crabapple (Pyrus ioensis), cottonwood (Populus sp.), and ash (Fraxinus sp.).

Faunal resources in the project area include a wide variety of birds, fish, and mammals, creating a fairly stable procurement base during prehistoric times. Of especial interest is the fact that the project area lies under a major fly-way for migrating waterfowl. While in the field, several varieties of waterfowl were observed, including wood duck (Aix sponsa), mallard (Anas platyrhynchos), and coot (Fulica americana). Several small fragments of freshwater mussels were found, but their source was indeterminable. Apparently, the prehistoric source for shellfish was further downstream at the confluence of the Rock River and the Mississippi River (Van Dyke and Overstreet 1979:28). The Rock River also supplies numerous aquatic resources, and common upland mammals include deer (Odocoileus virginianus), raccoon (Procyon lotor), squirrel (Sciurus sp.), and rabbit (Sylvilagus floridanus).

CLIMATE

Characteristically, the climate in northwestern Illinois consists of cold, dry winters and hot, humid summers. The annual average precipitation is 30 inches, with the greatest amount falling in spring and early summer. The mean annual temperature is 50°F, with an average range of 34°F in the winter to 74°F during the summer (U.S. Army Corps of Engineers, Xerox manuscript). The growing season lasts approximately 173 days (Van Dyke and Overstreet 1979:11).

PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS AND EXISTING
INFORMATION ON CULTURAL RESOURCES IN THE VICINITY
OF THE PROJECT AREA

Quite a number of archaeological investigations have been conducted in Rock Island County, Illinois, during the past century. Of course, certain periods of the areal prehistory have been studied more intensively than others, reflecting contemporary research considerations, project limitations, or personal interests. Despite the fact that urban development and modern farming techniques have destroyed unknown numbers of archaeological sites, still a large quantity of sites have been identified in the vicinity of the project area. However, much of the archaeological work in the Rock River valley has extended no further than identification and limited testing of sites. Therefore, while regional settlement patterns are fairly well understood for the project area, very little is known of intra-site patterning.

ARCHAEOLOGICAL INVESTIGATIONS PRIOR TO 1960

During the latter half of the nineteenth century, considerable interest, both scholarly and otherwise, was focused upon the enigmatic earthen mounds found throughout much of the eastern United States. At the time, the commonly held view was that the mounds were built by a vanished race, separate from and superior to the American Indians (McKusick 1970; Mallery 1976:145). More often than not, this theory was used as a means of justifying nineteenth century treatment of the Indians.

Within the Quad Cities area, a group of individuals interested in pursuing scientific investigations organized the Davenport Academy of the Natural Sciences around 1875. Many topics of scientific interest were subject to Academy investigations, although heavy emphasis was placed upon the exploration, description, and explanation of the numerous prehistoric mounds located in the Quad Cities area. The results of these investigations, including maps and drawings of the mounds, placement of the burials, and descriptions of the artifacts were published within the Academy's Proceedings. Some of the artifacts collected during these excavations were curated with the Academy (now a part of the Putnam Museum, Davenport, Iowa), while others were placed in private collections.

While the Academy's excavations certainly could not be considered professional by contemporary standards, they represent the nineteenth century norm for archaeological investigations, and have provided fairly detailed, if not theoretically based, descriptions of the mounds and their occupants (Farquharson 1876; Gass and Farquharson 1878; Gass 1881; and Lindley and Pratt 1881). It is unfortunate that, at the time, so little attention was paid to the living people who constructed the mounds. Virtually nothing is known of the associated villages and, now that modern development has destroyed many of the remaining mounds and their surroundings, the likelihood of learning more about the

Middle Woodland period in the Quad Cities area has become exceedingly slim.

The archaeological investigations conducted by the Academy lasted little over 20 years, although at least half that time was spent in a virulent debate concerning a possible fraud within several of the mound investigations. In short, the apparent hoax was centered around a number of "suspect" artifacts, including a stone calendar and some elephant pipes. At its height, the controversy involved everyone from the Davenport Academy to the Smithsonian Institution. A thorough and interesting treatise of the "Davenport Conspiracy" has been written by McKusick (1970).

Another topic of interest to various members of the Academy during the last quarter of the nineteenth century was the interpretation of the numerous shell heaps located along the banks of the Mississippi River and its tributaries. Various explanations were provided for the presence of these shell heaps, ranging from their development by river action and/or ice floe deposition to being the result of cultural refuse patterns (Pratt 1878; Toellner 1879; Van Dyke and Overstreet 1979). This topic, however, was never accorded the degree of attention that the "Mound Builder" question received.

During 1932 and 1933, archaeologists from the University of Chicago performed a preliminary archaeological survey and a subsequent general survey of Rock Island County. The surveys were conducted under the aegis of the University of Chicago's Department of Anthropology, which was sponsoring a statewide archaeological inventory. Particular attention was placed upon determining 1) the types, number, and temporal limits of the prehistoric cultures in the area, and 2) an explanation of the apparent absence of any Mississippian culture in Rock Island County (Harrington 1933:1).

Survey techniques included informant contact, pedestrian survey, and limited testing. Among those sites that were slated for testing were two shell middens, neither of which yielded anything classifiable as human cultural material. However, other shell heaps in the vicinity of the Rock River-Mississippi River confluence produced both animal bones and artifactual material, therefore refuting the arguments of various Davenport Academy members that the shell mounds were formed by natural causes (Harrington 1933:29).

ARCHAEOLOGICAL INVESTIGATIONS FROM 1960 TO 1980

In 1961, archaeologists from the Department of Anthropology, University of Illinois, conducted a survey of the Rock River valley and the adjacent bluffs from the mouth of the river 60 miles upstream. The purpose of the project was to discover the range and distribution of sites in the area and to learn more about prehistoric settlement patterns. Ninety-six previously unrecorded sites were located during the course of the investigations. Tests were subsequently conducted on two Middle-to-Late Woodland sites and one Archaic campsite (Bluhm et al. 1961).

In 1959 and, again, in 1962, test excavations were conducted by the University of Illinois on a shell mound near the mouth of the Rock River. The site was apparently a multicomponent habitation shell midden, but the results of the excavations have never been reported.

The University of Wisconsin-Milwaukee Department of Anthropology initiated in 1972 a series of archaeological surveys along various river valleys in the state. A survey of the Rock River valley from the Wisconsin state line to its mouth was added in 1973. The survey of the lower Rock River was concentrated within two areas: 1) a four-square mile area in the dissected uplands bordering the south side of the valley, and 2) a six-square mile area in the Rock River floodplain. As a result of this survey, 106 previously unrecorded sites were identified and additional information was collected on 24 others (Birmingham 1976).

During the mid-1970's, the Rock River valley and its surroundings were subjected to a number of archaeological surveys as a result of Federal legislation requiring cultural resources investigations on impacted lands. In 1974, a survey of the Rock River and Mississippi River lines of flood protection in the Milan-Big Island vicinity was conducted by the Environmental Research Center of Iowa City, Iowa. Several previously recorded sites were re-examined and a few new sites were discovered, but no attempts were made at assessing the significance of any of the sites (Welchman 1975).

In 1975, a survey was conducted of the Moline levee right-of-way and its associated borrow area in the bluffs bordering the south side of the Rock River by the Department of Anthropology, University of Wisconsin-Milwaukee. No sites were located along the heavily developed riverfront, but 20 sites were identified along the bluffs (Benchley and Blakeslee 1975).

The University of Wisconsin-Milwaukee again conducted an archaeological investigation of two transmission line corridors across the lower Rock River valley in 1976. Five sites, including a historic Sauk village, were either discovered or re-identified during the study (Benchley and Birmingham 1976).

Several investigations within the area around the Rock River-Mississippi River confluence have been conducted by the Great Lakes Archaeological Research Center, Inc. during the years since 1976. These have included a survey of the East Moline line of flood protection (Gregg and Peters 1976), an assessment of known cultural resources in the area for their National Register eligibility (Van Dyke and Peters 1977), and the excavation of a Middle Woodland shell midden along the Mississippi River that was identified during the East Moline survey (Van Dyke and Overstreet 1979). The latter study is one of the only reported full-scale excavations in the area.

REPORTED SITE DISTRIBUTION IN AND NEAR THE PROJECT AREA

As a result of the various surveys that have been conducted of the Rock River valley and the surrounding uplands, a number of observations can be made concerning prehistoric settlement patterns in and near the project area.

Seven sites have been identified within 1 km and 19 sites have been located within 2 km of Project Area A. Project Area B, on the south bluffs of the Rock River, is surrounded by six known sites within 1 km and 19 sites within 2 km.

Of the 38 known sites located within 2 km of the two project areas, 34 are situated in the floodplain of the Rock River. Most of these are located on either the parallel sand ridges or the terraces at the base of the adjacent bluffs. Of the remaining four sites, two are located in the bottomlands bordering Coal Creek, a secondary tributary of the Rock River, and two are situated on the bluffs overlooking the emergence of Coal Creek into the Rock River floodplain. Further upstream, a number of sites have been reported in the bottomlands and on the bluffs overlooking Shaffer Creek, another secondary tributary of the Rock River.

Of the 38 sites being discussed here, more than half (26) are occupations of unknown cultural affiliation. These sites are generally small and contain little diagnostic cultural material. One of these sites has been designated as a possible workshop on the basis of the types and amount of chipping debris present (Illinois SHFO site files). Of the remaining 12 sites, six have been identified as Archaic, two as either Archaic or Woodland, one is a Middle Woodland mound group and associated habitation (this has been destroyed), one is a Late Middle Woodland (Steuben) habitation, and one may be a Mississippian occupation. The latter designation is particularly interesting as no other Mississippian sites have been identified in the Quad Cities vicinity.

Based upon the results of the University of Wisconsin-Milwaukee surveys during the early 1970's, it was determined that the upland plateaus and bluffs exhibited a site density of 1.3 sites per 40 acres (Birmingham 1976:19). This figure, however, was based upon a survey of lands around Shaffer Creek, one of the secondary streams in the area, and does not apparently reflect the actual site distribution in areas located away from permanent sources of water. Additionally, it was hypothesized that 48% of the sites in and near the vicinity of Shaffer Creek are chert workshops, located with the intention of utilizing the chert exposures of that valley (ibid). Closer to the two project areas under examination here, but further from the chert-bearing exposures, the number of identifiable workshops decreases noticeably.

On the basis of all the work that has so far been done in the Rock River valley, several generalizations concerning prehistoric settlement

patterns can be made:

- 1) the earliest sites tend to be located on the bluffs overlooking secondary stream valleys and on the sandy ridges in the major floodplain,
- 2) the larger Woodland village sites are usually situated in the Rock River bottoms, but Woodland mounds and mound groups are located on the bluffs overlooking the Rock River floodplain, and
- 3) processing sites, such as shell middens or chert workshops, are usually located close to their sources of raw supplies.

Basically, these generalizations tend to indicate that Project Area A is in an area of high site probability due to its location in the Rock River floodplain along several sandy ridges. Project Area B, on the other hand, may be located in an area of lower site probability because of its location on the bluffs away from any secondary stream valley.

HISTORICAL RESOURCES IN AND NEAR THE PROJECT AREA

The National Register of Historic Places lists seven structures in the Rock Island-Moline area, but none of these are located in or near the project areas. A nomination decision is currently pending for the site of the Historic Sauk village, Saukenauk, where Black Hawk was born. The nomination was made on the basis of historical significance, rather than actual archaeological integrity (the site is apparently located in the heart of Moline), so the outcome of the decision is uncertain at this time. Another structure in Rock Island for which a nomination is currently being prepared is the Fort Armstrong Theater (Mark Wagner, April 30, 1980; personal communication).

Several historic Sauk villages have been identified during various surveys of the lower Rock River valley, but none of these are located near the project areas (Bluhm *et al* 1961; Weichman 1975; and Benchley and Birmingham 1976). It is unknown how many of these sites were the actual location of Saukenauk at one time or another, due to the fact that the village site was moved every several years. It can be assumed, however, that if none of these sites were ever the actual location of Saukenauk, they were closely enough-allied to that village to render their remains of both historic and archaeological importance.

AN OVERVIEW OF THE PREHISTORIC AND HISTORIC OCCUPATION IN THE PROJECT AREA

THE PREHISTORIC PERIOD

While a number of archaeological surveys have been conducted in the Moline-Rock River area, a detailed prehistoric chronology for the area is still not available because of the relative lack of controlled site testing and excavation in the area. As discussed in greater detail in the last chapter, the archaeological investigations of the Quad Cities area have generally been centered upon specific research topics, resulting in the understanding of certain temporal periods and/or cultural manifestations to the virtual exclusion of the remainder of the prehistoric record.

The emphasis within this review, especially for the prehistoric era, will be placed on specific documentation for human occupation in and near the project area. There are several general summaries of the regional prehistory that are readily available (Harrington 1933; Bennett 1952; Blum (ed.) 1961; Birmingham 1976). These reports can provide the background perspective against which can be judged the relative completeness of information on the prehistoric occupation of the project area. The following prehistoric overview will stress, therefore, both those periods for which archaeological data are available from the local project area as well as those periods for which little is known and upon which future emphasis should be placed.

PALEO-INDIAN PERIOD

The Paleo-Indian period in the Quad Cities area is known solely from the appearance of diagnostic Paleo-Indian artifacts within the collections of local amateur archaeologists. The fact that these artifacts, most of which are fluted projectile point types, have been recovered from the Quad Cities area indicates that the region was subject to human exploitation during the Paleo-Indian period. The extent and actual dynamics of this exploitation, however, remain largely unknown.

For the purposes of this discussion, it can be assumed that human occupation in the project area probably did not occur until after 15,000 BC. It was at this time that the recession of the Woodfordian glacial advance had progressed sufficiently to allow for the support of a stable large mammal population. Of course, the explanation for this date is based upon the traditional assumption that the major form of subsistence procurement during the Paleo-Indian period was the intensive hunting of large game animals. Much of this assumption has been founded on the distinctive hunting-oriented tool kit generally associated with the Paleo-Indian period. Recent information (Schafer 1977) from other areas of the country, however, is proving that a wider range of resources was being exploited during the Paleo-Indian period than had previously been thought. Thus, it may soon become necessary to revise current ideas about the dates and types of Paleo-Indian occupation that occurred in glaciated areas of the continent.

Relatively few Paleo-Indian campsites have been located and excavated in eastern North America. Much of our current information on Paleo-Indian site distribution and density has been extrapolated from the mapping of surface scatters and isolated finds. From this information, it has been observed that Paleo-Indian occupation generally occurs on terraces and bluffs overlooking major watering areas. Usually, these areas are located along major drainages, although several Paleo-Indian sites have been found near minor drainages or in interriverine areas. Based upon these generalizations and upon discussion with local collectors in the Moline area, it can be predicted that the Paleo-Indian sites may be present along constricted portions of the Coal Creek and Shaffer Creek drainages east of the project areas and on the terraces and bluffs bordering the lower portions of these two streams. Attention should be focused on these areas during any future archaeological survey activities in the area to perhaps shed further light on the Paleo-Indian occupation of the Moline area.

TRANSITIONAL PERIOD

A few bifacial artifacts, mostly of the Dalton-Meserve point varieties and generally attributed to the transitional period between the classic Paleo-Indian and the Archaic periods (ca. 9000 to 7000 BC), have been found in the vicinity of the project area. Again, these implements have been found solely through surface collections; there are no known or documented Transitional period occupation sites in or near the project area.

While the increased variety of tool types appearing in Transitional period sites elsewhere in the country has been used to hypothesize a gradual shift to a more generalized adaptation, it should be expected that Transitional period site distribution is probably very similar to that of the Paleo-Indian period. This expectation is supported by evidence from a number of stratified rock-shelter sites throughout the middle part of the continent (Logan 1952; Fowler 1959; Wood and McMillan 1976). Thus, future archaeological survey activities in the Moline area that have as one of their goals the discovery of possible Paleo-Indian occupation sites should also explore the possibilities of locating Transitional period sites in the same general areas.

ARCHAIC PERIOD

The Archaic period in the eastern half of the North American continent is generally considered to have lasted from around 7000 to 2500 BC. The accepted view of the Archaic is that it was a period of changing adaptation--first, from a restricted large-animal hunting base to a more generalized hunting and gathering subsistence pattern, and later, from the random exploitation of all available resources to the scheduled procurement of several defined seasonal resources (Cleland 1976). The shift in subsistence adaptations was accompanied by the introduction of a wide variety of food-processing implements (e.g., manos, nutting stones, ground stone tools, etc.). Many archaeologists have viewed the initial shift from a hunting adaptation to the exploitation of a larger range of resources as being at least partially induced by a change in climatic conditions resulting in the establishment of a wider range of resources

(Griffin 1960; Barreis and Bryson 1965). However, other evidence has shown that the subsistence base did not change very much, except in the introduction of some new species. Instead, it appears that the Early to Middle Archaic tool kit was expanded to more effectively use the resources already available to a limited degree during earlier periods (Fowler 1959; Wood and McMillan 1976).

Viewed archaeologically, not only did the tool kit used for resource procurement change during the Archaic period, but, as social roles became more specialized and intergroup relationships evolved into more complex forms, new and totally different artifact types became much more common in Archaic contexts. These artifact types include some exotic materials that had been traded over long transportation networks, the first mortuary goods found in recognizable burial contexts, and a few artifact types apparently used for purely ceremonial reasons. Late Archaic sites are characterized by a pronounced division of labor and the spatial isolation of activities, not only within sites but between them as well. Discrete activity areas and the use of a number of different sites for specialized purposes has been documented archaeologically throughout the eastern portion of the North American continent (Winters 1969).

In the vicinity of the project area, at least six sites have been identified as Archaic and two as being either of Archaic or Woodland origins, based upon the presence of diagnostic Archaic artifacts. It appears, moreover, that several, and possibly many, of the other campsites discovered during the various surveys of the Rock River and its environs may also be of Archaic origins.

Thus, it appears that the Moline vicinity was probably occupied during the latter half of the Archaic period. The resources in the area would certainly have been such that sporadic, but repeated, occupation could have occurred throughout the Archaic period. It seems certain that the area could have at least supported a subsistence pattern devoted to the specialized exploitation of a few selected resources, such as was the case during the Late Archaic.

WOODLAND PERIOD

The Woodland period in eastern North America has generally been differentiated from the Archaic by the inclusion of ceramics in regional artifact inventories. At least during the Early Woodland period, the introduction of pottery into the cultural assemblage was basically the only difference between that and the Late Archaic period (Dragoo 1976). Ceramic-bearing sites have been dated to as early as 2500 BC in certain parts of eastern North America, although ceramics were probably not introduced into the cultural inventory of the project environs until sometime later.

The albeit limited investigations in the Quad Cities area have demonstrated that the earliest ceramic type in the area was that representative of the Black Sand phase (Van Dyke and Overstreet 1979:43).

This type has been subjected to a very detailed description by Fowler (1959:96). No specific Early Woodland sherds or lithic artifacts have been reported from the vicinity of the two project areas, however.

As the Woodland period progressed in eastern North America, a sophisticated and complex cultural manifestation developed and, ultimately, reached its peak as the Hopewell Tradition. This tradition, which was at its height during the Middle Woodland period (ca. 500 BC to AD 500), has been characterized by the construction of conical and linear earthen burial mounds, the development of complex trade networks involving a number of exotic materials (e.g., marine shell, mica, obsidian, etc.), the evolution of a pan-regional ceremonial cult, an increased reliance upon horticulture, and a semi-sedentary lifestyle. These traits were, of course, locally modified within smaller regional boundaries, but their appearance throughout the Ohio and Upper Mississippi River valleys indicates that this was a period of strong cultural florescence.

Evidence from the Quad Cities area for its settlement during the Middle Woodland period has come almost totally from the historical accounts of the Davenport Academy's excavations of mounds in the area. The descriptions of the mound contents were often not detailed enough, however, to assign a precise temporal or cultural designation. The University of Wisconsin-Milwaukee surveys during the mid-1970's demonstrated that Middle Woodland sites, of which three have been found in the vicinity of the project areas, were usually located within the bottoms and terraces of the main valleys, in secondary valleys, and on bluff tips. Very little diagnostic ceramic material was recovered, but the material that was found indicates that these were probably Late Middle Woodland sites related to the Steuben and/or Weaver phases (Birmingham 1976:22). Many of the Middle Woodland sites that have been recorded in the Quad Cities area are now, due to their locations, destroyed through the forces of urban development.

From AD 500 on, the Woodland period was characterized by the decline of Hopewell-related ceremonialism, a fragmentation of the large Middle Woodland settlement centers into smaller, isolated villages and camps, and the exploitation of a variety of resources. Generally, the Late Woodland period remains vastly underrepresented in the Quad Cities regional inventory.

MISSISSIPPIAN PERIOD

Elsewhere in eastern North America, the period from AD 1100 to AD 1400 was characterized by another, even more sophisticated, cultural florescence than the Hopewell Tradition. Diagnostic traits of the classic Mississippian included sedentary settlement within large, fortified urban centers, the construction of truncated earthen temple mounds around a central plaza, an elaborate ceremonial complex, and a heavy dependence upon maize agriculture. The classic Mississippian cultures, however, were not as widespread spatially as was the earlier Hopewell Tradition. In many areas of the eastern United States,

including the Upper Mississippi Valley, a cultural complex that retained many of the earlier Late Woodland characteristics apparently continued, without much change, to the Protohistoric and Contact period. Within the Quad Cities area, virtually nothing is known of the Mississippian period. A few diagnostic Mississippian artifacts (i.e., small triangular projectile points and shell-tempered pottery) have apparently been found in the area, and one seeming Mississippian site was reported to have been destroyed during the past fifteen years (Van Dyke and Overstreet 1979:49). Other than this, the prehistory of the Quad Cities area from the Late Woodland to historic contact remains a virtual unknown.

THE HISTORIC PERIOD

A number of readily available regional and local histories have been written for the Moline area (Black Hawk 1932; Chicago Democratic Press 1854; Tillinghast 1888; Bateman 1914; Way 1926; Quaitte 1942). Therefore, this historical overview has been written to provide a concise regional perspective against which can be viewed the results of this survey, its predecessors, and future archaeological investigations in the area.

PROTOHISTORIC AND HISTORIC ABORIGINAL OCCUPATION

The protohistoric and early historic occupation of the Moline area has remained shrouded in mystery to researchers of the area's history. Early explorers along the Mississippi River, such as Marquette in 1673 and LeSeuer in 1700, reported seeing no evidence of aboriginal occupation in the area. It may be that this area was being used as a buffer zone between the Illinois and the Sioux as a result of a conflict due to trade rivalries. This practice has been documented to have occurred elsewhere in the western Great Lakes region (Hickerson 1962).

It was not until the mid-1700's that the first historical references were made to Indian tribes possibly living in the Quad Cities area. The tribe being discussed was the Sauk, who apparently migrated into the area from the Fox River in Wisconsin. The earliest historical references were two from 1741-42 stating that the Sauk were living on the Rock River, and one in 1752 stating that the "chief of the Sauk of Rock River and some chief men renewed alliance with the Peoria Illinois" (Horr 1974:53). It is not known, however, whether the Sauk and their allies, the Fox, had moved as far south as the mouth of the Rock River by this time.

In his autobiography, Black Hawk (1932) reported that he was born in the large Sauk village, known as Saukenauk, at the mouth of the Rock River in 1767. He did not state when the village was founded. An early historian of the Scott County, Iowa, area reported that the village was founded around 1730 (Downer 1910 (1):48), although more recent scholars have dated its origins to around 1764, just a short time before Black Hawk's birth (Temple 1958:94; Wallace 1970:13).

The village of Saukenauk was apparently moved a number of times during its roughly 75-year history, but always within several miles and always on the north side of the confluence of the Rock and the Mississippi Rivers. Associated with the village were also a number of smaller Sauk and Fox villages on the south side of the Rock River and a reputed eighteenth century Fox village on the western side of the Mississippi River (Weichman and Stack 1974:13). In 1777, Francisco Cruzat, Lieutenant-Governor of the Spanish "Illinois Country" mentioned that a group of Winnebagoes had a village five miles upriver from the Rock River mouth (Horr 1974:89). A map of the States of America, published in 1799, showed an Iowa Indian village on the east bank of the Mississippi River below the mouth of the Rock River (Horr 1974:91). Edward Tanner, in 1818, reported several Fox lodges on the east side of the river near Fort Armstrong and around four miles from Saukenauk. A Fox village of approximately 30 lodges was reported for the same general area in 1820 by S.W. Henry (Weichman and Stack 1974:13).

Various population estimates have been given for the Sauk and Fox occupation of the Quad Cities area during the early historic period. In 1762, Lieutenant James Correll, commandant of the British garrison at Green Bay, Wisconsin, reported that the Sauk and the Fox on the Rock River could each boast of 350 warriors (Horr 1974:72). In June of 1780, American troops apparently destroyed a large Sauk village, which may, indeed, have been Saukenauk, that was located three miles upriver from the mouth of the Rock River and had a population that included 700 warriors (Horr 1974:90). By 1804, both the Lewis and Clark expedition and Major Amos Stoddard, the first American civil governor of Upper Louisiana, reported a large population (ca. 3200 persons) of both Sauk and Fox living in the Quad Cities area, of which the majority were living on the west side of the Mississippi River (Horr 1974:118-119). In 1813, a large group of Sauk left the Quad Cities area to join a pro-American Fox village in the Des Moines area. This left an aboriginal population in the area of about 410-530 persons. However, the pro-American faction returned to the Rock River in 1817 at the close of British and American hostilities, thereby increasing the population level to again around 3000 persons (Horr 1974:169-172). Major Stephen H. Long, a topographic engineer for the U.S. Army, visited the revitalized Sauk village in 1817 and described it in the following manner:

"On Rock River, 2 miles above its mouth, and 3 across the point from Fort Armstrong, is a Sack [sic] village, consisting of about one hundred cabins of 2, 3, and in some instances, 4 fires each. It is by far the largest Indian village situated in the neighborhood of the Mississippi between St. Louis and the Falls of St. Anthony. The whole number of Indians at this village amounts probably to between two and three thousand. They can furnish eight or 900 warriors, all of them armed with rifles or fuses" (Long 1860-67:69).

By the 1830's, however, most of the Sauk and the Fox had moved further west and out of the Quad Cities area.

EARLY EXPLORATION AND SETTLEMENT

Except for exploratory passes through the Quad Cities area by persons such as Marquette and LeSeuer, the first Europeans to intensively explore the area did not arrive until 1760-61. During that winter, a group of 132 men from Fort Michilimackinac and under the command of Monsieur Beaujeu, "Captain of Canada," were forced to winter with a group of Sauks and Foxes on the Rock River a few miles upriver from its mouth (Horr 1974:65). Other early travellers in the area included Francisco Cruzat; Thomas Hutchins, a British Army Engineer, in 1778; Charles Gautier de Verville, a British agent, in 1779; and two British traders, Richard McCarty, in 1779, and Robert Dickson, in 1797 (Horr 1974:83-92). During the years of 1804-1805, two major westward expeditions passed through the Quad Cities area: the Lewis and Clark Expedition and that led by Lieutenant Zebulon Pike (Horr 1974:118, 130).

Three trading posts were established in the Quad Cities area during the late eighteenth and early nineteenth centuries. French posts were built at the mouth of the Wapsipinicon River and on Credit Island (Abbott and McKay 1978:83), and an American Fur Company post was founded on Smith's Island above Pleasant Valley (Lage and Voelliger 1973:2). This post was built on land deeded to the managers of the American Fur Company, Colonels Farnham and Davenport, by early settlers and traders in the area, the LeClaire's (Van Dyke and Overstreet 1979:51). In 1816, the American military post, Fort Armstrong, was built on Rock Island (Huebinger 1974:4). This was the forerunner of the still functioning Rock Island Arsenal.

One of the earliest settlers in the Rock Island-Moline area was the French fur trader who was later involved in the Black Hawk war, Antoine LeClaire. A number of structures and places in the area have been named after this man and his brother.

CONFLICT AND RESOLUTION

As in many areas of the North American continent during the late eighteenth and early nineteenth centuries, the settlement of and ultimate development of political control over the Quad Cities area was not accomplished without the use of military action. As mentioned earlier, a large Sauk village located three miles upriver from the mouth of the Rock River was reported to have been destroyed by American troops in 1780. On November 3, 1804, William H. Harrison, then Governor of the Indiana Territory, negotiated a treaty with a certain group of Sauk and Fox Indians (7 Stat. 84) to cede a large tract of land in the present states of Wisconsin, Illinois, and Missouri. Article 3 of the cession provided for an annuity of goods to each tribe and Article 7 stated that as long as the lands remained the property of the United States government, the Sauk and the Fox would retain habitation and hunting rights (Horr 1974:122). Many Sauk and Fox who had not participated in the treaty, as well as neighboring tribes, such as the Sioux, felt that the treaty was invalid. As a result, cohesion within the Sauk and Fox tribes, as well as between them and their allies, became strained as both pro- and anti-American factions began to develop.

When the War of 1812 broke out between the United States and Britain, those Sauk and Fox who had formed a pro-American faction moved to the Des Moines area, leaving a group behind in the Quad Cities area that chose to side with the British during the conflict. The Sauk and Fox in the area were reinforced by a number of other Indian tribes who moved into the area temporarily during war. These additional groups of people included representatives from the Piankeshaw, Kickapoo, Winnebago, Potawatomi, Ottawa, and Menominee tribes, keeping the local Indian population at around 2000 persons (Horr 1974:170).

The Indians living in the Quad Cities area participated and were victorious in two battles during the War of 1812. On July 4, 1812, an American detachment of reinforcements for Prairie du Chien set out from St. Louis under the direction of John Campbell. They reached the Rock River in mid-July and were invited ashore by the native inhabitants. The Sauk and their allies had heard that Prairie du Chien had been recaptured by the British and decided to attack Campbell's detachment. On the morning of July 21, they surprised the Americans on an island just above the Rock River rapids, leaving 16 dead and 20 wounded. The island is now called Campbell's Island. On September 5 of the same year, Zachary Taylor led a retaliatory mission of 430 men and eight keelboats to level Saukenauk. The British commander at Prairie du Chien had received advance notice of the pending attack and had already dispatched reinforcements of 30 British soldiers, 100 Indians, two swivel-guns, and a three-pounder to support the Sauk population. This created a total of around 1000 men defending the village. On September 6, the Indians took the initiative and attacked the American forces at the head of Credit Island, forcing the latter to retreat and successfully saving Saukenauk from destruction (Weichman and Stack 1974:14-15).

Despite the valiant efforts of the Sauk and their allies, the British were defeated by the Americans and forced to retreat entirely from the area east of the Mississippi River and south of the Canadian border. The United States government caused a reaffirmation of the Treaty of 1804 to take place upon the close of the War of 1812. This resulted in the signing of the Treaty of 1816 at St. Louis (7 Stat. 141). The Sauk warrior, Black Hawk, participated in this signing, but later claimed to have been duped by the Federal government. He began a movement among the Sauk and Fox to rebel against the United States government and to reclaim the lands that had been lost as a result of the treaty.

Not all of the Sauk and their allies agreed with Black Hawk's antagonism, however. In 1823, a large group of Indians, led by Chief Keokuk, moved across the Mississippi River and into upland Iowa. Black Hawk and his followers remained in Saukenauk. After an increasing amount of open hostility, General Gaines and his militia forced Black Hawk's band out of Saukenauk and into the Davenport-Bettendorf area in 1831. A series of short skirmishes followed in 1832, a period known as "Black Hawk's War," but the Indian resistance was not strong enough to withstand eventual American domination of the situation. On September 21, 1832, a new treaty signed by the Sauk (including Black Hawk), Fox, and Winnebago ceded six million acres of land on the west side of

the Mississippi River. This treaty has become known as the "Black Hawk Purchase," and was signed in what is now Davenport, Iowa, on a spot near Farnam and Fifth Streets (Huebinger 1894; Weichman and Stack 1974:15). Later, in 1836, another treaty known as "Keokuk's Reserve" was also signed in the Davenport area. A local historian reports:

"The Treaty of 1836 was held at Davenport. The site is in doubt. Some of the older citizens place it on East River Street, on the height between Bridge and Mississippi avenues; others say where Prospect park is located. Dr. E.S. Barrows, who was present at the treaty, gave the former location. He used to say that Black Hawk's camp was on the hills later known as Camp McClellan and now McClellan Heights" (Downer 1910(1):88).

The signing of the 1836 treaty effectively brought to an end the Indian occupation of the Quad Cities area.

The Quad Cities vicinity, while never again being the site of armed conflict, has continued to the present to support a military presence. Upon the site of the original Fort Armstrong was built the Rock Island Arsenal immediately prior to the Civil War. The Arsenal has variously served as a munitions manufacturing center, supply depot, prisoner-of-war camp, and administrative center since that time. Also, during and after the Civil War, a training camp, Camp McClellan, was set up in what is now East Davenport.

TRADE AND TRANSPORTATION

Until well into the twentieth century, most of the Moline area remained very rural. The two Moline project areas are still located in a fairly rural part of the county. In recent years, however, the Quad Cities area has become a major manufacturing center for farm implements. The J.I. Case, International Harvester, and John Deere Companies all have major manufacturing plants in the Quad Cities area.

Prior to the introduction of the railroads, the major form of transportation in the area was by way of the Mississippi River. Even at that, there was no regular river service until the 1860's and the channel remained unimproved until the 1890's. Because of the Rock River rapids, the Mississippi was closed six to seven months of the year and was often low at other times. Thus, the railroad was introduced into the area at a fairly early date; the Chicago-Rock Island line was completed by 1854 and the Davenport-Iowa City line by 1856. The bridge connecting the two lines was also completed in 1856. Later, the Iowa-Illinois railroad was built along the north shore of the Mississippi in 1899, and the Clinton, Davenport, and Muscatine line was completed in 1904 (Abbott and McKay 1978:92, 125). With the completion of the Corps of Engineers lock and dam at the Rock River rapids, barge traffic has provided a major source of freight transportation through the area.

RESEARCH GOALS AND METHODOLOGY

RESEARCH DESIGN

In terms of the practical aspects of this project, the major goal was to identify, document, and evaluate all cultural resources within the designated project areas. To achieve this goal, an inventory of both previously known and newly discovered sites was to be completed using background literature search, pedestrian survey, and shovel testing techniques. Upon completion of the inventory, all identifiable cultural resources were to be assessed in terms of their local and regional significance and their cultural integrity. The remainder of this report includes a discussion of the techniques used during completion of the fieldwork portion of this project, a description of the results of the survey, an assessment of the significance of all located cultural resources, and recommendations for further investigations in the area.

Theoretically, the major goal of this project was to further define the scope of prehistoric and historic settlement patterns in the Moline vicinity through the comparison of any newly discovered site locations with those locations previously recorded for the vicinity. A related research goal was the analysis of any located cultural resources in terms of local environmental factors that may have had a determining effect on the choice of site locations. Of especial importance in examining this research question were the differences exhibited by upland sites as opposed to sites located in the river bottoms. A discussion of these research topics as they relate to the results of the survey is also included in the following pages.

FIELD METHODS

The basic field method used during the survey was the combination of 100% pedestrian coverage of all exposed areas and the use of systematic and standardized shovel tests at 15 m intervals along transects established at 15 m distances across the unexposed portions of the study area. Seven transects were required to cover Project Area A. In areas that were inaccessible, survey patterns were varied to allow the closest possible identification of site potential.

If a site was identified, it was determined prior to initiation of fieldwork that two separate procedures would be followed to delineate the site boundaries and to assess site depth and integrity: 1) in exposed areas, artifacts were to be collected across the surface with shovel tests at the boundaries to determine both surficial and subsurface site extent, and with a larger test unit near the center of the artifact concentration to determine site depth and integrity; and 2) when a site was located by shovel testing in unexposed areas, additional tests were to be dug at 5 m intervals in transects along each of the cardinal directions until site boundaries were defined, with a larger test unit near the center of the site to again determine site depth and cultural integrity.

When a site was located, its location and boundaries were plotted on both the project map and the appropriate 7.5 minute USGS quadrangle map. All pertinent site information was recorded on standardized site survey forms from the Illinois Archaeological Survey, Champaign-Urbana. Daily field records were also taken to provide further documentation for the survey results. All data were returned to the WAPORA archaeology laboratory in Cincinnati, Ohio, for processing and analysis.

In the proposed fill disposal area (Project Area A), the survey and testing program was completed in one day. Practically the entire area was unexposed, the ground cover consisting of marsh species in the low-lying areas and grasses on the parallel sandy ridges. Several shovel tests were attempted in the marshy areas to determine the type of soil and to assess the potential for cultural materials. It was discovered that the water table fluctuated from ground level to approximately 10 cm below the surface, and no cultural materials were observed.

Shovel tests were placed at regular 15 m intervals along seven 15 m transects across the sandy ridges. One site (Site Number W-547-1) was discovered on the northernmost ridge. Its boundaries were defined by the excavation of additional shovel tests at 5 m intervals away from the initial tests until no further cultural material was observed. Approximately 40 shovel tests were excavated at Site W-547-1. A 1 m test unit was excavated near the center of the site to determine site depth and cultural integrity at an area with the highest density of artifactual material. An isolated projectile point was found during shovel testing of the next sandy ridge to the south. Approximately 20 additional shovel tests were placed in this ridge at 5 m intervals around the initial test, but no other cultural material was discovered.

The survey of the proposed borrow area for the Moline levee project was conducted over a period of 1-1/2 days. Approximately two-thirds of the project area, covering most of the ridgetops, had been plowed. In these areas, a 100% surface pedestrian survey was used to locate any potential sites. On the points of the bluffs, on the slopes, and in the bottoms of the dissecting ravines, shovel tests were excavated to below the subsoil interface at 15 to 20 m intervals, depending upon the degree of slope. No sites were identified as a result of the survey in Project Area B.

ANALYTICAL METHODS

The site that was discovered in Project Area A was documented using the standard IAS site survey form. Appended to the form is a xeroxed copy of the relevant portion of the appropriate USGS quad sheet. All artifacts were washed, then classified using local taxonomies, if possible. Prehistoric lithic artifacts were classified according to raw material, degree of decortification, and evidence for use as a tool. Historic artifacts were classified using criteria emphasizing manufacturing technology, decoration, and function. The complete descriptive artifact inventory is included in Appendix B.

RESULTS OF THE SURVEY

The survey of the proposed fill disposal area (Project Area A) resulted in the identification of one tentatively identified Archaic site on the north side of the northernmost sandy ridge within the project area (Site Number W-547-1). The reason this has been tentatively identified as an Archaic site is because no diagnostic artifacts were identified within the site proper. However, on the next ridge to the south, approximately 40 m away, an isolated expanded-stem projectile point was found that can be attributed to the late Archaic (Figure 2). It cannot be determined if the projectile point is, indeed, associated with the site itself, but its isolated position might indicate that it was lost during a short hunting foray away from the camp.

The site itself measures approximately 70 m east-west by 10 m north-south. It is interesting to note that it is totally confined to the side of the ridge away from the river and facing the bluffs. This type of site location has also been observed elsewhere in the Rock River valley (Bluhm et al 1961:8). Shovel testing at approximately 40 different locations within and near the site boundaries and excavation of a 1 m test unit revealed that all of the artifacts are concentrated within the top 30-35 cm of topsoil/plow zone; no artifacts were discovered below this level and no cultural features were observed in the subsoil.

The artifact density on the site appeared to be light to moderate, with one to five artifacts recovered from approximately 15 of the test pits. Besides the isolated projectile point, other artifacts demonstrating use as tools include one bifacial knife, two bifacial scrapers, two unifacial scrapers, and one utilized flake (Figures 3 and 4). The complete descriptive artifact inventory is included in Appendix B.

On the basis of comparison with many other sites of a similar nature near the project area, this site probably represents an intermittent, short-term occupation, used for the purpose of procuring local resources. The site revealed no evidence of features or information that could be considered new or unique in terms of the prehistoric record for the area. On the contrary, it is simply another indication of the shallow, intermittent occupation of sandy ridges that characterizes much of the prehistoric occupation of the Rock River floodplain and its significance lies in the fact that it fills in one more gap in the available knowledge on site distributions in the area.

The survey of the proposed borrow area for the Moline local flood protection project (Project Area B) revealed absolutely no indication of prehistoric occupation and only one piece of modern glass and two "skeet" fragments, indicating virtually no use, other than farming, of the area during the historic period as well. This is not surprising when one considers the known site locations along the bluffs overlooking the Rock River bottoms. Within 2 km of the two project areas, only two sites have been located on the bluffs and these are overlooking the emergence of Coal Creek into the Rock River floodplain. Else-

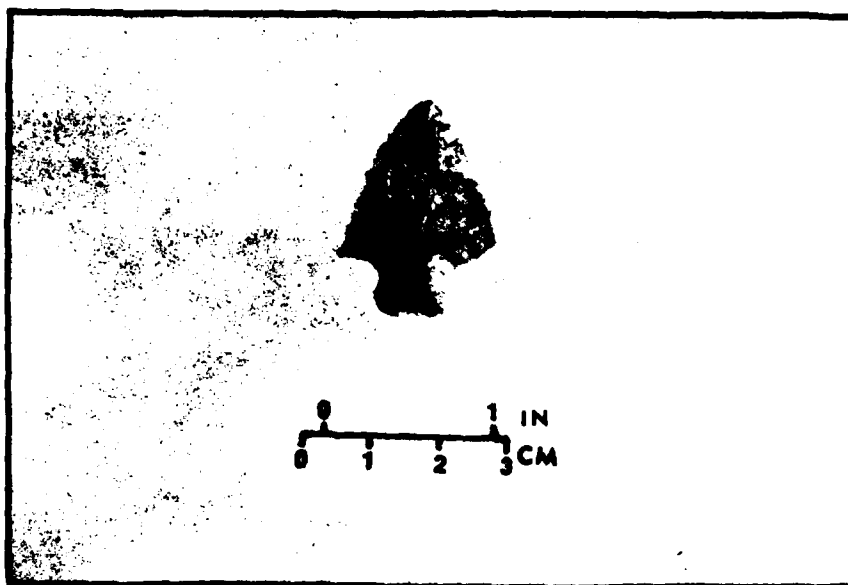


FIGURE 2. Expanded-stem projectile point, Site W-547-1.

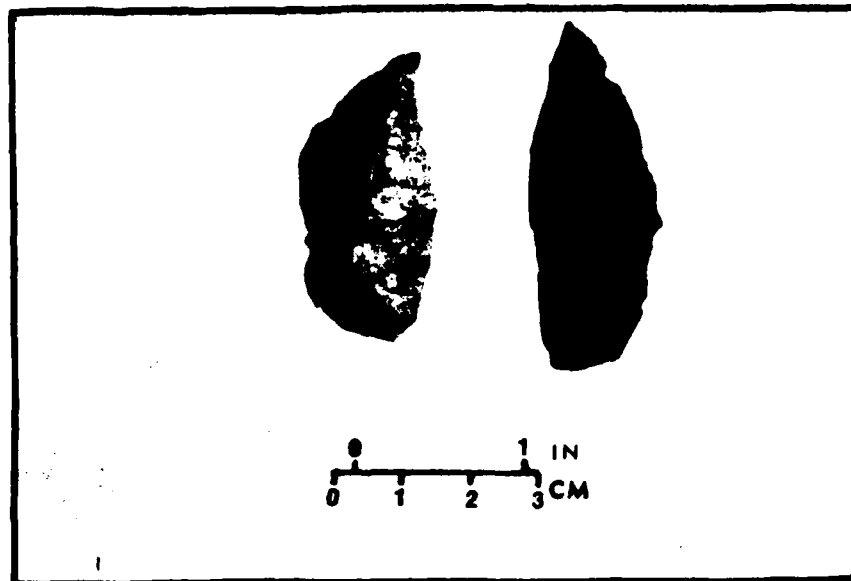


FIGURE 3. Unifacial scraper (left), bifacial knife fragment (right), Site W-547-1.

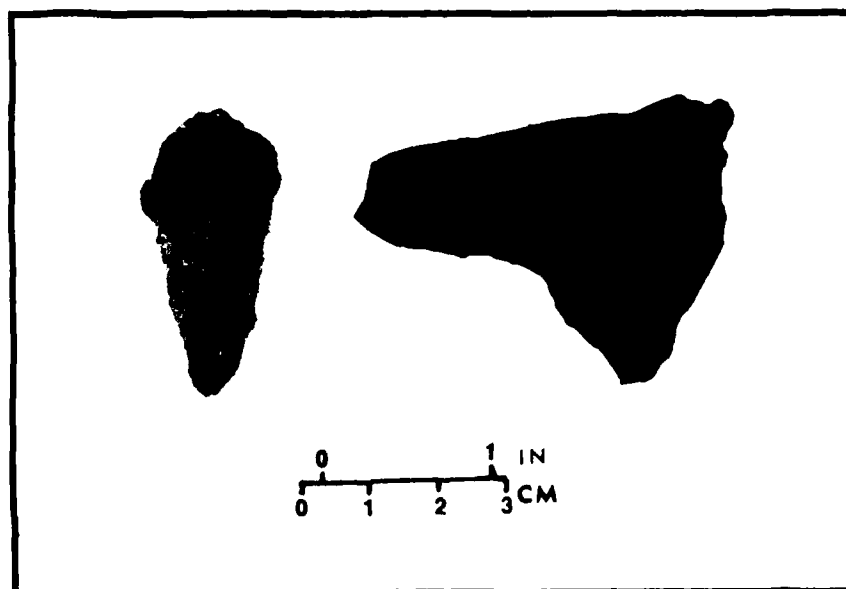


FIGURE 4. Bifacial scraper (left), unifacial scraper (right), Site W-547-1.

where along the valley, the same type of pattern occurs. Sites on the bluffs tend to be situated near the secondary stream valleys. It appears that the bluffs away from permanent streams were not needed or desired for occupation purposes because there were more than enough areas for settlement to occur adjacent or near permanent streams. Hence, Project Area B would have been considered a marginal location for settlement and no sites were located within its boundaries.

RECOMMENDATIONS AND CONCLUSIONS

No previously recorded cultural resources, either archaeological or historical, were found to occur within either Moline Local Flood Protection Project Area A or B. The survey of the two areas located one plowzone site (Site Number W-547-1) in Project Area A that has been tentatively labelled as Archaic, and no sites in Project Area B. The site that was discovered in Project Area A has been tentatively identified as Archaic on the basis of an isolated expanded-stem projectile point found approximately 40 m away. Shovel testing at 40 locations within and near the site and the excavation of a 1 m test unit at the site revealed no in situ cultural features and that the total artifact deposition for the site occurs in the plowzone. This site is totally characteristic of numerous other small campsites in the Rock River floodplain and will probably not provide any additional information on the prehistoric occupation of the area other than in terms of its location and its spatial relationships with other sites in the area. This information has already been collected by virtue of the survey results. The site is, therefore, not considered significant and no further work is recommended.

The survey of the proposed borrow area (Project Area B) revealed no evidence of either prehistoric or historic occupation. Being located away from a permanent water source, as this area is, the potential for the location of cultural resources in this area is not high. On the basis of the survey results and in comparison to other surrounding areas, this area is not considered to be significant culturally and no further work is recommended.

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APPENDIX A

SCOPE OF WORK AND VITAE OF KEY PERSONNEL

December 1979

SCOPE OF WORK
FOR ARCHAEOLOGICAL SURVEY OF
PROPOSED BORROW AREA FOR THE
LOCAL FLOOD PROTECTION PROJECT
MOLINE, ILLINOIS

I. Survey Objectives

The purpose of this contract is to locate and assess, for possible inclusion in the National Register of Historic Places, archaeological sites which may be present in the proposed borrow area for the Moline local flood protection project (see Exhibit I). This action is being taken to assure compliance with NEPA, EO 11593, 33 CFR 305, 36 CFR 63, 36 CFR 800.10 and the National Historic Preservation Act of 1956.

II. Specific Requirements

1. The Contractor shall review the pertinent literature on the area and contact the Illinois State Historic Preservation Office and Illinois Archaeological Survey for additional information on known sites. It is also expected that other sources of information will be consulted and that the pertinent information obtained will be documented in the draft and final report.
2. The Contractor shall perform an initial survey of sufficient quality to locate any sites likely to be impacted by the project. This will include shovel testing and coring in areas where surface visibility is limited.
3. In addition to the requirements of items 1 and 2, the Contractor shall perform a cultural resource survey of sufficient scope and quality to allow for the determination of eligibility for each site to the National Register of Historic Places. This is to be done as defined in 33 CFR 305.4f, 36 CFR 63, and 36 CFR 800.10.
4. Recommendations shall be made by the Contractor for mitigation for any site determined to be eligible or to have potential for inclusion on the National Register that is likely to be impacted by this project. Estimates of time and labor required for data recovery and an explanation of how these figures were arrived at shall be included in the recommendations.
5. The principal investigator will submit a research design within 15 days of award of the work order and prior to commencing field work. The research design will include the strategy to be employed in the survey and formulate research questions that the survey will be designed to answer. The Contracting Officer will notify the Contractor of approval of the research design, at which time literature search may commence. Field work will not start until notice to proceed is issued by the Contracting Officer. The Rock Island District will furnish the Contractor a letter of introduction which will establish the identity of his representatives as contractors for the Corps of Engineers. The Contractor will be responsible for obtaining permission to enter on any privately-owned property for the purpose of performing field investigations.

6. Basic data description, including provenience and metrics, U.T.M. coordinates for all sites, photographs, and drawings will be provided for use both in support of the author's arguments and conclusions, and as a source of basic information that may find wider use by other archaeologists. A set of USGS maps showing the specific site locations will be provided by the Contractor but shall not be included in the report. At least three good quality photographs of archaeological work in progress and a written summary suitable for public information will be provided by the Contractor.

7. The Principal Investigator shall be responsible for preparing a report on these investigations. This report must include, but not be limited to: (1) detailed cultural site location in respect to project location; (2) possible cultural affiliations; (3) classification of sites into effect or no effect categories in respect to impact of the action on them; (4) recommendation of either further investigation, data recovery, preservation, or no further work, for each site impacted by the project; (5) a discussion specifically addressing the question of eligibility to the National Register for each site likely to be impacted by construction according to the criteria set forth in 36 CFR 63, Appendix A; (6) pertinent information from the literature search; and, (7) documentation of coordination with groups and persons listed in item 1.

8. The report shall further include but not be limited to the following items:

- Title Page
- Abstract
- Table of Contents
- Introduction
- Environmental Setting
- Soil Analysis
- Review of Literature
- Interviews with Local Collectors
- Methodology/Research Plan
- Analysis
- Research Results
- Location for Curation of Artifacts of Each Site
- Statement of Significance
- Conclusions
- Bibliography
- Appendices and Maps

This scope of work and vitae of principal investigator, project director and/or field director will be included as an appendix to the report as will a schedule of field and lab work. The Contractor shall not refer to specific site locations in the body of the report. These references will be listed in an appendix.

9. Any artifacts or cultural material collected during the survey shall be deposited with a recognized institution for preservation upon completion of the contract, in coordination with the Heritage Conservation and Recreation Service. Artifacts will remain the property of the US Government.

10. The draft report is required to be submitted to the Contracting Officer within 30 days after notice to proceed. The Contracting Officer will have 90

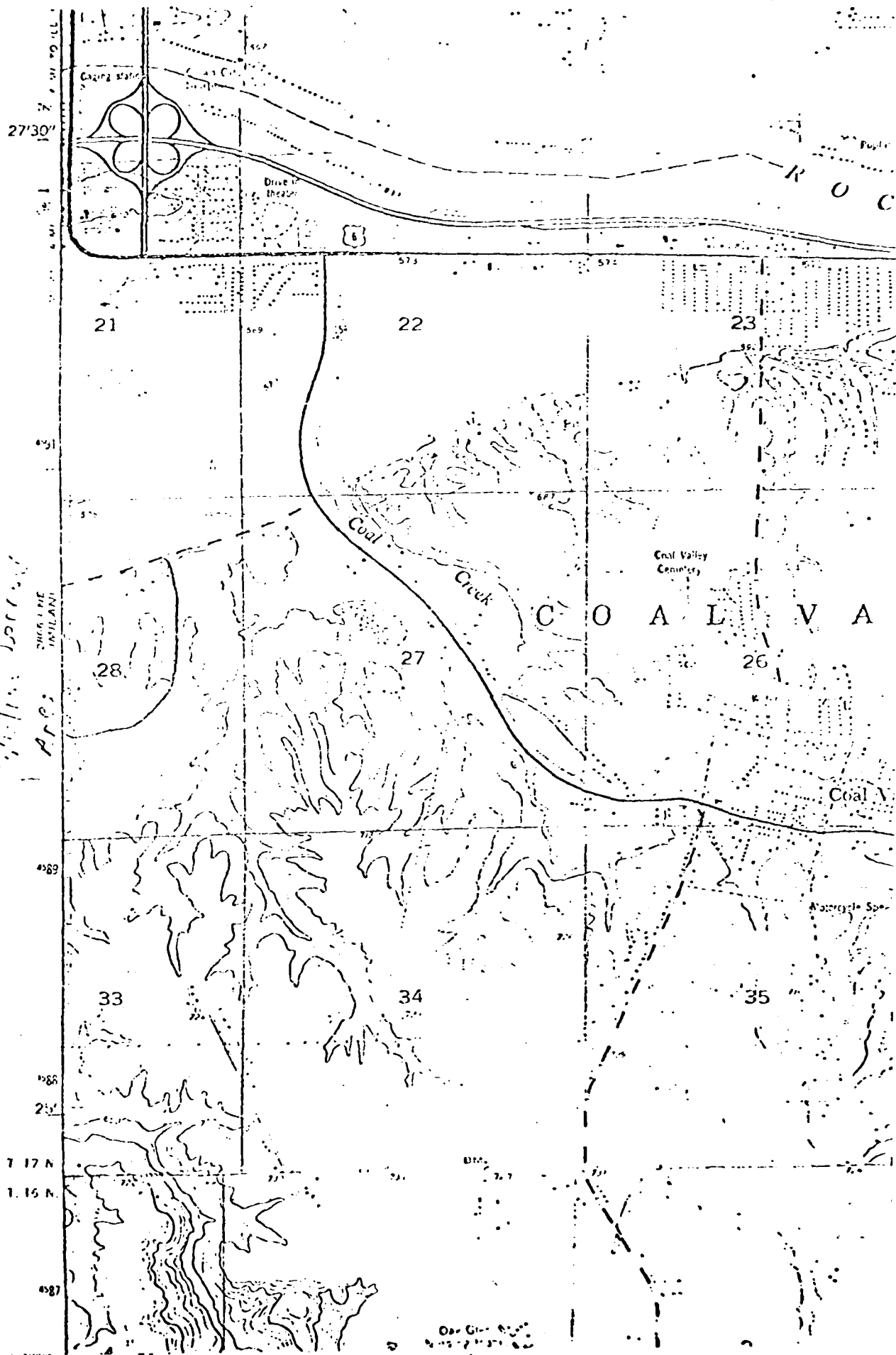
days to review the draft report. The final report is required 30 days after receipt of the Contracting Officer's comments on the draft report. The final report shall include as an appendix any letters of review received on the draft report. The Contractor shall furnish the Corps of Engineers with 6 copies of the draft report and 15 copies of the final report.

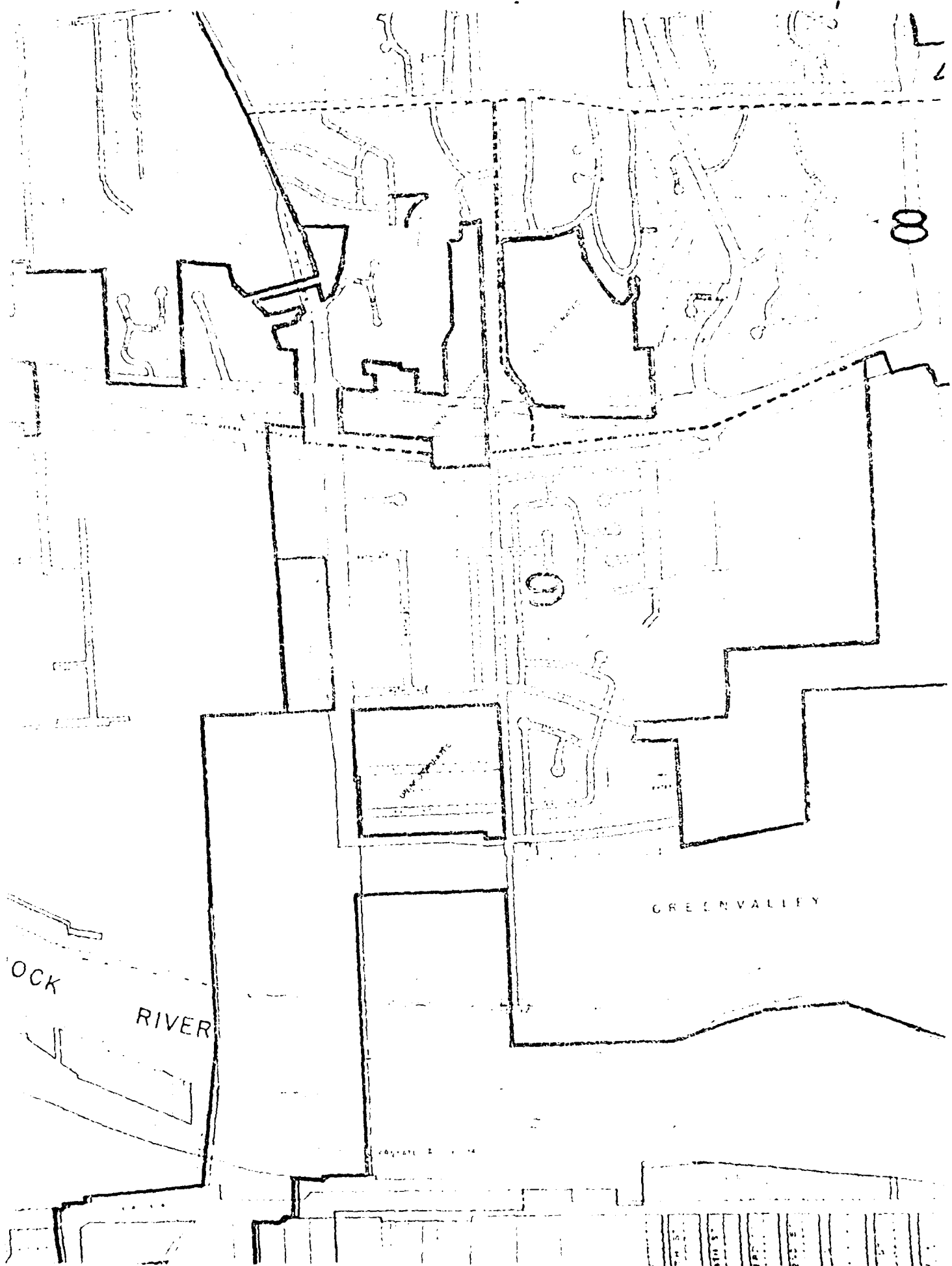
11. Neither the Contractor nor his representative shall release any sketch, photograph or report, or material of any nature, obtained or prepared under the contract, without prior specific written approval of the Contracting Officer, prior to the acceptance of the report by the Government. After acceptance of the final report its reproduction and use shall not be restricted by either party. The appendix containing the exact site locations will not be included in reports released to the public.

1 Exhibit
As stated

Coal Valley, Illinois
7.5 min. Quad Series

Approx. 1/2 mile
2000 ft. ELEVATION





Marlesa A. Gray
Archaeologist
Cincinnati Regional Office

EDUCATION

B.A. in Anthropology with high honors, 1975, Indiana University, Bloomington
M.A. in Anthropology, 1978, Michigan State University, East Lansing
Doctoral candidate in Anthropology, Michigan State University

EXPERIENCE

Ms. Gray joined the WAPORA, Inc. staff in 1979. She specializes in both archaeological and architectural investigations and has had extensive training and experience in the fields of historical archaeology, archival research, and folk studies, both oral and material. She is familiar with the prehistoric cultural resources of the Ohio Valley and the Great Lakes. Ms. Gray has had experience in the preparation of National Register nomination forms and is cognizant of all historic and cultural resource preservation legislation. Ms. Gray has worked on urban archaeological sites and architectural recording projects throughout the eastern United States. She has also directed and/or participated in historical archaeological investigations on sites dating from the eighteenth century to the World War II era.

Prior to joining WAPORA, Ms. Gray was a student intern with Interagency Archeological Services-Atlanta, Heritage Conservation and Recreation Service, Department of the Interior. During her 17-month internship, Ms. Gray was involved in all aspects of government contracting as it relates to historic preservation and cultural resource management. This included the evaluation of significant resources, the preparation of mitigation plans and scopes-of-work, the evaluation of proposals, the writing and administration of contracts, field and laboratory monitoring, and reviewing reports. Ms. Gray also participated as a liaison between other government agencies and their archaeological contractors, as well as helping other agencies to develop their own historic preservation programs. During her tenure with IAS-A, Ms. Gray was instrumental in the development of several archaeological testing and mitigation strategies for extensively altered, urban site locations, in New Orleans, Louisiana, and in Charleston, South Carolina.

While at IAS-A, Ms. Gray was responsible for the planning and implementation of an interdisciplinary program for the development of an historical overview and oral history study of the proposed Pine Ford Lake project area, Washington, Jefferson, and St. Francois Counties, Missouri. This was done in conjunction with the St. Louis District Corps of Engineers. During the period of her employment at IAS-A, Ms. Gray participated in an architectural inventory of the Big River basin, Missouri, and excavations at two historic sites in Greenwood County, South Carolina. She also served as an historic ceramics analyst, on a consulting basis, for archaeological projects in Mississippi and South Carolina.

Ms. Gray is familiar with the prehistory, history, and ethnography of the Columbia River basin and adjacent areas in Washington, Oregon, and Idaho. From 1976 to 1978, Ms. Gray prepared the final report of archaeological investigations at the Fort Vancouver National Historic Site, Vancouver, Washington, under a contract with the National Park Service. This report, incorporating the data from ten field seasons at the site, was submitted for publication to NPS in 1979.

In 1976, Ms. Gray served as the Assistant Field Director for the Sault Ste. Marie Archaeological Project, Sault St. Marie, Michigan. This project was concerned with the excavation of two historic sites: an eighteenth century French trading post, Fort de Repentigny, and a nineteenth century American military post, Fort Brady. In 1975, Ms. Gray directed the archaeological investigations at the Brouillette House, Vincennes, Indiana. Excavations at the standing eighteenth century French house were centered around the identification of the original exterior structural features of the house and the investigation of the cellar deposits. Ms. Gray was also involved as Field Director with the Indiana Junior Historical Society archaeology workshops from 1973 to 1975.

Ms. Gray is skilled in the use of the transit, photography, and graphics equipment, flotation and sonar separation techniques, and keypunch. She received her field training at Indiana University, Bloomington, Indiana.

HONORS RECEIVED

Alpha Lambda Delta
Hoosier Scholar
Metz Scholar, Indiana University
Phi Beta Kappa

PROFESSIONAL AFFILIATIONS

Society for Historical Archaeology
Society for American Archaeology
Indiana Historical Society

PUBLICATIONS AND REPORTS

- Gray, M. 1974. The Pennville Project. Indiana History Bulletin.
- Gray, M. 1975. Preliminary report of excavations at Brouillette House, Vincennes, Indiana. Glenn D. Black Laboratory of Archaeology, Indiana University.
- Gray, M. 1980. Archaeological survey and testing, Moline Local Flood Protection Project, Rock Island County, Iowa. WAPORA, Inc., Cincinnati, Ohio.

- Gray, M. 1980. Archaeological survey and testing, Bettendorf Local Flood Protection Project, Scott County, Iowa. WAPORA, Inc., Cincinnati, Ohio.
- Gray, M., G.M. Watson, and W.K. Pape. 1980. Cultural resources survey of 24 miles of proposed pipeline right-of-way, Washington County, Ohio. WAPORA, Inc., Cincinnati, Ohio.
- Gray M. In press. Structural aspects of Fort Vancouver, 1829-1860: An historical-archaeological interpretation. National Park Service.

Barbara R. Huels
Assistant Archaeologist
Cincinnati Regional Office

EDUCATION

B.A. in Anthropology, 1978, University of Cincinnati, Cincinnati, Ohio
Graduate Program in Anthropology, 1978-1980, University of Cincinnati,
Cincinnati, Ohio

EXPERIENCE

Ms. Huels joined the WAPORA, Inc. staff in August 1980. Her undergraduate training has been in physical and cultural anthropology with special emphasis on archaeology. In addition, her studies in a wide range of biological and physical sciences have enabled her to use a broad based approach to cultural resource investigations. She is currently a candidate for the Master's Degree in Anthropology. Her thesis research combines medical data with physical and cultural anthropology to produce a model of the interactions between culture, biology, and environment in a tuberculous population. As a graduate research assistant, Ms. Huels (with Anthony Perzigian) was involved in chemically extracting remains of tubercle bacilli from tuberculous-like lesions on skeletal material from the Turpin Site, Ohio.

Prior to joining WAPORA, Ms. Huels was a summer intern with the Ohio Historic Preservation Office, on assignment to the South Central Ohio Regional Archaeological Preservation Office, housed in the Cincinnati Museum of Natural History. Here she directed archaeological reconnaissance and survey, laboratory analysis, and report writing for two kilometer-square areas in Highland County. This report is part of a six-county investigation to produce predictive models for archaeological and cultural resource site locations in south central Ohio, to be used by planners and developers. She also supervised volunteer crews on an Ohio River floodplain survey in Scioto County. With working in a Regional Preservation Office, Ms. Huels has had contact with state and federal cultural resource preservation legislation, as well as compliance and review procedures.

Field experience during her education at the University of Cincinnati brought Ms. Huels into contact with many phases and aspects of archaeological research and investigation. Her field experience includes long term research projects as well as prehistoric site testing and cultural resource surveying. Between 1976 and 1977, she served as a crew member and instructor during archaeological investigations at the Incinerator Village Site, under the direction of J. Heilman. In the summer of 1978, she was a participant in the Salmon Ruins Research Project, Eastern New Mexico University, directed by Dr. Cynthia Irwin-Williams. In 1979, Ms. Huels was a crew member on the Ohio Historical Society, Gallia County highway right-of-way test pit survey, a contracted

cultural resources survey for Ohio Department of Transportation. In the spring of 1980, she assisted Marlesa Gray, WAPORA, Inc., with two cultural resource survey and testing projects located in Bettendorf, Iowa and Moline, Illinois, contracted by the U.S. Army Corps of Engineers, Rock Island District.

HONORS RECEIVED

Trainee in Physical Anthropology, University of Cincinnati, 1979-1980
Charles Phelps Taft Graduate Fellow in Anthropology, University of Cincinnati, 1978-1979
Phi Beta Kappa, University of Cincinnati, 1978
August F Foerste Associate, Dayton Museum of Natural History, 1976

PROFESSIONAL AFFILIATIONS

Ohio Archeological Council

REPORTS

Huels, Barbara R. 1980. A survey report of two SCORAPO sample units in Highland County, Ohio. On file at the Ohio Historic Preservation Office, Ohio Historical Society, Columbus.

APPENDIX B

DETAILED ARTIFACT INVENTORIES FROM THE
TWO PROJECT AREAS

APPENDIX B
DETAILED ARTIFACT INVENTORIES

PROJECT AREA A - site on north side of northernmost ridge, Site Number W-547-1

Prehistoric Lithics:

- 1 expanded stem projectile point
32 mm X 24 mm X 5 mm
evidence of heat treatment
- 1 bifacial knife fragment
50 mm X 19 mm X 13 mm
- 2 bifacial scrapers
42 mm X 20 mm X 7 mm
35 mm X 25 mm X 11 mm
- 2 unifacial scrapers
58 mm X 40 mm X 15 mm
42 mm X 20 mm X 10 mm
- 6 primary flakes
- 21 secondary flakes
- 14 thinning flakes
- 1 utilized flake
- 1 chert chunk
45 mm X 25 mm X 22 mm

Historic Glass:

- 2 fragments window glass
- 1 fragment clear vessel glass

Historic Metals:

- 1 wire nail fragment
- 1 high-brass shotgun shell base
- 2 pieces slag
- 2 unknown, highly rusted metal artifacts

PROJECT AREA B

Historic Ceramics:

- 2 "skeet" fragments

Historic Glass:

- 3 brown vessel fragments

APPENDIX C

IAS SITE FORM FOR PROJECT AREA A

Recorded

ILLINOIS ARCHEOLOGICAL SURVEY

Survey No.

County Rock Island
 Twp. South Moline
 Quadrangle Coal Valley
 Location

Reg. Inst. No. W-547-1
 Culture possibly Archaic
 Type of site habitation

W1/2 NE1/4 SW1/4 NE1/4 Sec. 15 Twp. 17N Range 1W
 Site owner City of Moline, Illinois
 Site address U.T.M. Zone 15
 Previous owners E710755 N4593470
 Present tenant E710660 N4593500
 Directed to site by
 Mapped by Marlesia Gray, Barbara Huels
 Extent of site (area and depth) 70 m NW-SE X 10 m N-S
 30-35 cm below surface (totally contained within
 plowzone)
 Previous excavation none
 Pitting none

ENVIRONMENT

Topography on north side of sandy ridge running parallel to Rock River; ridge bordered on north and south by low-lying marshy areas

Water supply Rock River 1.2 km to the south

Drainage good on sandy ridge
 extremely poor in surrounding marshy areas

Nearby sites RI 136, 137, 138, 256, 273

Modern occupation (building, plowing, etc.) has been plowed in the past, but currently lying abandoned

Type of soil sandy loam
 Ground cover heavy grasses

MATERIAL FROM SITE

1 expanded stem projectile point, 1 bifacial knife fragment, 2 bifacial scrapers, 2 unifacial scrapers, 6 primary flakes, 21 secondary flakes, 14 thinning flakes, 1 utilized flake, 1 chert chunk
 2 window glass fragments, 1 clear glass vessel fragment, 1 wire nail fragment, 1 shotgun shell base, 2 pcs. slag, 2 unknown metal objects

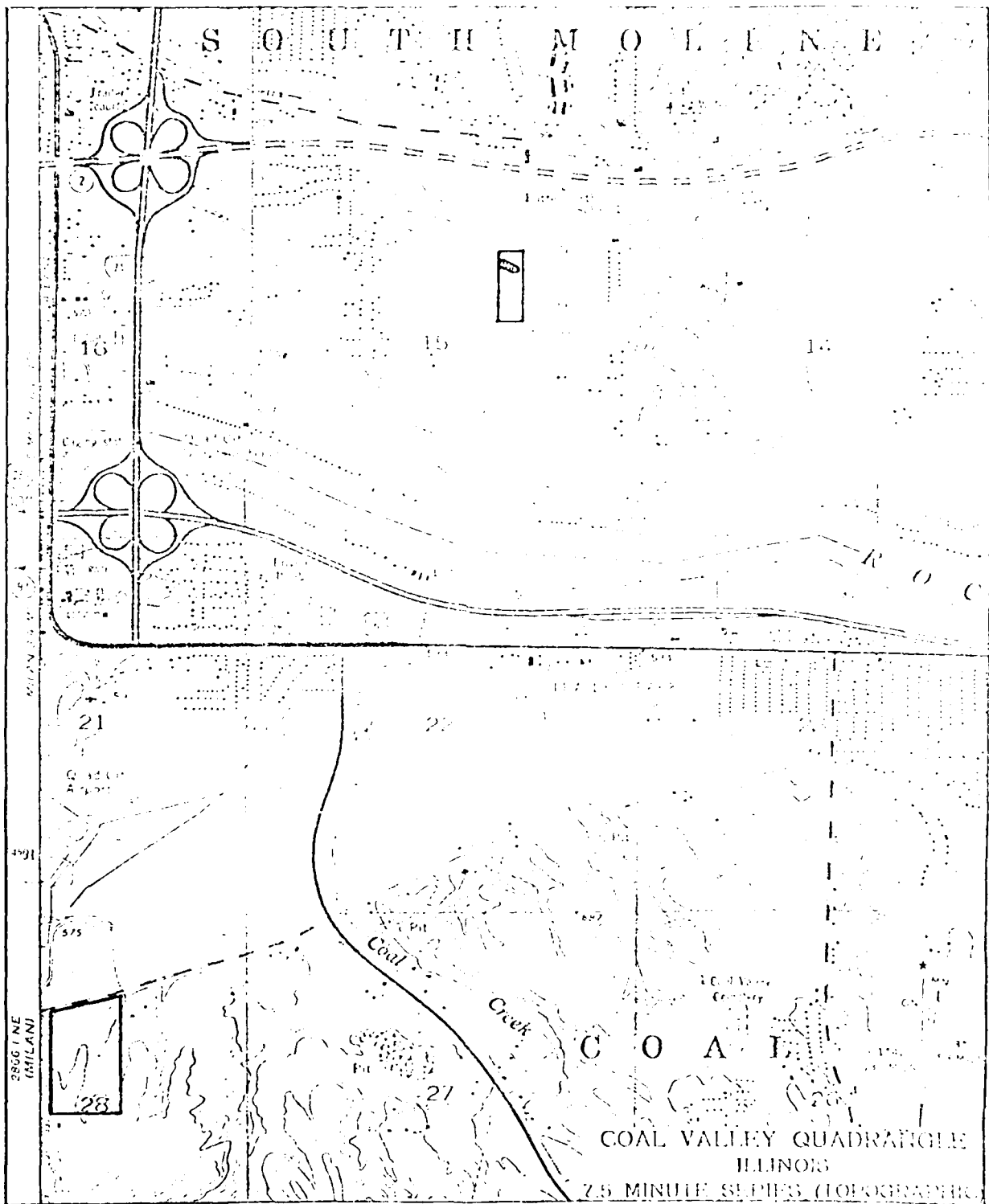
Surface coll.	Date	Owners
Tested yes	Date 5/4 - 5/5	By whom M. Gray, B. Huels
Excavated	Date	By whom
Nature and extent of collections		

Study permission — U.S. Corps of Engineers, Rock Island District
 Study facilities WAPORA, Inc., 5700 Hillside Ave., Cincinnati, OH 45233

MATERIAL REPORTED AS BELONGING TO SITE

Owner of material
 Certainty of origin
 Photos
 Site reported by M. Gray, B. Huels
 Survey report by M. Gray

Date 5/5/80
 Date 10/80 Visited



APPENDIX D

COMMENTS ON THE DRAFT REPORT



DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING
ROCK ISLAND, ILLINOIS 61201

C.C. M. GRAY
Proj 547 File

REPLY TO
ATTENTION OF:

NCRED-PB

4 SEP 1980

Mr. Bernard L. Huff
Wapora, Inc.
5700 Hillside Avenue
Cincinnati, Ohio 45233

RE: DACW25-80-D-0002 P00003

Dear Mr. Huff:

We have completed our review of the draft report entitled "Archaeological Survey and Testing, Moline Local Flood Protection Project, Rock Island County, Illinois" and find it generally acceptable. Please address the following comments in the final version.

a. Page 5. While Weichman (1975:8) and VanDyke and Overstreet (1979:11) are probably correct, they are not the original sources. Suggest that original sources be cited.

b. Please illustrate the artifacts found in area A as mentioned in the SHPO's letter.

c. The report should go into more detail on the testing methodology used in area A. The fact that additional units were dug (shovel tests) and their interpretation should be presented explicitly.

On the whole we are pleased with this report and look forward to the final version. Copies of the SHPO's comments are inclosed for inclusion in the final report.

Do not hesitate to call if you have any questions.

Sincerely,

F. W. Collins

F. W. COLLINS
Authorized Representative of the
Contracting Officer

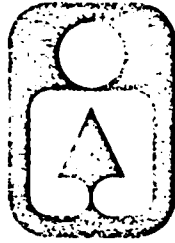
1 Incl
As stated

RECEIVED

SEP - 8 1980

WAPORA, INC.
CINCINNATI OFFICE

Illinois



Department of Conservation

life and land together

605 WM. G. STRATTON BUILDING • 400 SOUTH SPRING STREET • SPRINGFIELD 62706
CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 60601

David Kenney, Director • James C. Helfrich, Assistant Director

July 16, 1980

Mr. Doyle W. McCully
Department of the Army
Rock Island District Corps
Clock Tower Building
Springfield, IL 61201

ATTN: NCRED-PB

Dear Mr. McCully

The Department of Conservation Staff Archaeologist has reviewed the draft report entitled "Archaeological Survey and Testing, Moline Local Flood Protection Project, Rock Island County, Illinois", Marlesa Gray Principal Investigator. In general this report is well written and to the point. However, there are two difficiencies that must be made up in the final report.

First, although the artifacts recovered from the site located in Area A are discribed and discussed they are not illustrated anywhere in the report. Although the descriptions are adequate, the quality of the report would be improved considerably if the key artifact types described were also illustrated.

The second short-coming of the report is that it fails to explain why the investigators feel comfortable in determining the subsurface integrity of a site which has an areal extent of at least 700 square meters from a single 1 meter square test unit (a sample size of one-tenth of one percent). Clearly, they had some reason for assuming that such a small sample would yield data adequate for reaching their conclusion. Whatever those reasons where they should be explained in the report so that reviewers can independently assess their validity. In the absence of those data it is difficult to fully assess the adequacy of the reports conclusions and recommendations.

If you need any of these points clarified or feel that my office can be of further assistance, please contact Alan Downer the Department of Conservation's Staff Archaeologist directly.

Sincerely,

David Kenney
State Historic Preservation
Officer

DK/AD/lsa

DATE
FILME